

IN THE

United States Circuit Court of Appeals
FOR THE NINTH CIRCUIT

GLASS VOLT PRODUCTS, INC., CORPORATION,

Petitioner,

vs.

FEDERAL TRADE COMMISSION,

Respondent.

BRIEF OF PETITIONER

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FILED

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No. 10218.

IN THE

United States Circuit Court of Appeals

FOR THE NINTH CIRCUIT

ULTRA-VIOLET PRODUCTS, INC., a corporation,
Petitioner,

vs.

FEDERAL TRADE COMMISSION,
Respondent.

BRIEF OF PETITIONER.

Jurisdiction.

On December 7, 1940, Respondent issued, and later served upon Petitioner, its Complaint charging Petitioner with having violated section 12 of the Federal Trade Commission Act, as amended (Title 15, section 52, U. S. C. 1940 ed.) and section 5 of that Act, as amended (Title 15, section 45, U. S. C. 1940 ed.) [R. 1]. Petitioner duly filed its written Answer to said Complaint, and after hearing and other proceedings Respondent made a report in writing in which it stated its findings as to the facts, and issued and caused to be served upon Petitioner, on June 13, 1942, an order requiring Petitioner to cease and desist from certain of the acts and practices alleged in the Complaint [R. 95]. The jurisdiction of this Court is invoked under section 5 of the Federal Trade Commission Act, as amended (ch. 311, sec. 5, 38 Stat. 719; Title 15, sec. 45, U. S. C. 1940 ed.).

Statement of the Case.

Petitioner is a California corporation, with its principal place of business in Los Angeles. It is in the business of manufacturing and selling ultra-violet ray lamps for therapeutic and other purposes.

The Complaint of Respondent Commission [R. 1], in addition to customary formal allegations, charged that Petitioner had disseminated false advertisements for the purpose of inducing purchases of its product known as "Life Lite." The Complaint set forth fourteen excerpts quoted from Petitioner's advertising matter, and termed them "false, misleading and deceptive" [R. 3]. It charged, further, that by the quoted and similar representations Petitioner had represented to the public that its "Life Lite" lamp had certain enumerated [Par. Four—R. 6, 7] qualities or virtues, and that its use would give certain benefits and effects [*id.*]. The Complaint denied, categorically or with qualifications, that the lamp had such qualities or virtues or that its use would give such benefits or effects [R. 7-9]. It also alleged [R. 9] that the advertisements were false because they failed to reveal that use of the "Life Lite" without trained supervision might result in injury to the user.

Petitioner's Answer [R. 12] admitted engagement in interstate commerce, and that the excerpts set out in the Complaint were quotations from its advertisements, but pointed out that they were separated from their original context, and denied that they were false, misleading or de-

ceptive. It denied other material allegations of the Complaint, and alleged affirmatively that the product, "Life Lite," would "give benefits to the skin and to the general health of the individual in the manner and within the therapeutic limits outlined" in Petitioner's advertising [Par. Five—R. 14]. It denied the alleged danger of injury in using the product without trained supervision [R. 15], and alleged that the user was protected by means of a timing device contained in the lamp, and by warnings and instructions. By way of separate answer, Petitioner alleged that the representations made in its advertising were made in good faith and were founded upon scientific knowledge [R. 16], referring specifically to technical and scientific literature, including copies of writings attached to the Answer as exhibits. The Answer concluded by offering to stipulate that Petitioner cease and desist "from any further dissemination of such statements, representations and claims as, in the light of present day scientific knowledge, may be contrary to fact" [R. 19].

After a hearing before a trial examiner, followed by written and oral argument, the Commission issued its Findings and Order, dated June 8, 1942 [R. 78-98], which were served upon Petitioner June 13, 1942 [R. 413]. The Petition for Review by this Court was filed August 11, 1942 [R. 415].

Petitioner now contends that portions of the Commission's Findings, quoted hereinafter under the subtitle "Specification of Errors," were not supported by the evidence before the Commission, and, therefore, that provi-

sions of the Order to cease and desist based upon those portions of the Findings should be set aside.¹ Since it will be necessary to examine the questioned parts of the Findings and Order, together with the evidence relating thereto, in subsequent sections of this brief, no statement of such parts is made at this point.

¹The issues presented to this Court are much narrower and less numerous than those which were before the Commission. For example, a substantial part of the testimony before the trial examiner related to the charge in the Complaint [Par. 6—R. 9] that use of the "Life Lite" without trained supervision might result in injury to the user. While Petitioner disagrees with the Commission's Findings in this respect, the Order to cease and desist [Par. 2—R. 97, 98] merely requires Petitioner to insert in its advertisements the words "Caution: Use Only As Directed," when the directions for use contain appropriate warning. Accordingly, Petitioner is content to comply with this part of the Order, and raises no issue concerning it in this Court. Similarly, for one reason or another, a number of other issues which were before the Commission are not presented here, although Petitioner's submission does not mean concurrence in the Commission's Findings. However, some of the evidence relating to these eliminated issues appears in the printed record, either because it could not be deleted without loss of coherence or because it was designated for printing by the Commission.

Specification of Errors.

1. The following portion of the Findings of the Commission, to-wit:

The benefits afforded by respondent's lamp to the skin and to the general health cannot properly be compared with those afforded by natural sunlight because of the wide variation between the rays emanating from the two sources,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents that Petitioner's therapeutic lamp known as "Life Lite"

affords benefits to the skin or to the general health of the user comparable to those afforded by natural sunlight

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

2. The following portion of the Findings of the Commission, to-wit:

While ultra-violet rays of the wave length emitted by [Petitioner's] lamp possess bactericidal properties, such properties are effective only in those cases where the infection sought to be attacked is limited to the surface of the skin. The rays are incapable of pene-

trating the surface of the skin and destroying bacteria or fungi present below the surface. The use of [Petitioner's] lamp therefore does not constitute a cure or remedy or a competent or adequate treatment for such conditions as . . . ringworm, athlete's foot, acne, eczema, psoriasis . . ., all of which are due to causes existing below the surface of the skin,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp constitutes a cure or remedy or a competent or adequate treatment for . . . ringworm, athlete's foot, acne, eczema (or) psoriasis . . .

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

3. The following portion of the Findings of the Commission, to-wit:

In the case of sores and ulcers, the lamp may possibly stimulate the healing process but only in those instances in which the infection causing the condition is confined to the surface of the skin,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion"

reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp constitutes a cure or remedy for sores or ulcers, or that it constitutes a competent treatment therefor except in so far as it may stimulate the healing process in those cases in which the infection causing such conditions is confined to the surface of the skin

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

4. The following portion of the Findings of the Commission, to-wit:

The lamp possesses no therapeutic value in the treatment of . . . bronchitis,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp possesses any therapeutic value in the treatment of . . . bronchitis . . .

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

5. The following portion of the Findings of the Commission, to-wit:

It is incapable of building up in the body resistance to disease,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp builds up in the body resistance to disease

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

6. The following portion of the Findings of the Commission, to-wit:

It does not produce any chemical reaction with respect to the blood stream, . . .

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the

said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp . . . produces any chemical reaction with respect to the blood stream . . .

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

7. The following portion of the Findings of the Commission, to-wit:

It is incapable of building up the body's resistance to infection,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp builds up the resistance of the body to infection . . .

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

8. The following portion of the Findings of the Commission, to-wit:

Aside from its irritating effect, the lamp affords no stimulation to the tissues of the skin,

was without substantial support in the evidence received by the Commission but was contrary to such evidence and was arbitrary, capricious and unlawful; the "Conclusion" reached by the Commission and contained in its Findings at the end thereof was beyond the jurisdiction of the Commission and unlawful in so far as it depended upon the said portion of the Findings; the Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp affords any stimulation to the tissues of the skin in excess of such stimulation as may result from its irritating effect

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

9. The Order of the Commission that Petitioner cease and desist from disseminating or causing to be disseminated any advertisement which represents

that said lamp normalizes the chemistry of the body, improves metabolism, or builds new tissues, except in so far as its use may result in the production of Vitamin D

was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

10. Paragraph numbered "3" of the Order of the Commission, in so far as it was based upon or depends upon the portions of the Findings and Order of the Commission hereinabove quoted, was not supported by the record before the Commission and was beyond the authority and jurisdiction of the Commission.

Summary of Argument.

*Petitioner does not
this is incorrect*

(All of the issues concern the sufficiency of the evidence to support the Findings of the Commission.) Consideration of each of such issues must involve, of course, examination of all of the evidence bearing upon such issue. In the "Argument," immediately following, the analysis of the evidence is stated about as concisely, in the writer's opinion, as is feasible. Hence, it seems impracticable to attempt, here, more than a bare outline of the points which Petitioner undertakes to make and support in the following pages.

Petitioner does a business, in Los Angeles, in the manufacture and sale of ultra-violet ray lamps for various purposes, including therapeutic treatment. Only the therapeutic lamps are involved in this case. The business has been developed over a period of about ten years. Sales are made in interstate commerce. The product in question is a type of lamp known as "cold quartz," because its important element is a tube made of fused quartz which, in operation, does not develop such a high temperature as is developed by other types of quartz tube lamps. Rays emitted by cold quartz lamps are classified in the short-wave-length part of the electro-magnetic spectrum, most of them having wave-lengths shorter than those found in sunlight. Petitioner's lamp has been analyzed and tested extensively, and found to have the same output and effects as are standard for cold quartz type lamps. Ultra-violet ray lamps of various types are in common use.

At the hearing before the Commission's trial examiner, the Commission called as witnesses the President of Petitioner, two doctors, Ayres and Moor, and a Mrs. Dozier, who had been produced originally by Petitioner. In turn,

Petitioner called a consulting chemist and nutritionist, Dr. Truesdail, the head of the Department of Chemistry of Stanford University; Dr. Leighton, and a general practitioner of medicine and surgery, Dr. Parks. The Commission offered no rebuttal. Testimony given by the witnesses will be noticed in detail in subsequent parts of this brief.

The general question presented to this Court is whether the various portions of the Findings and Order of the Commission here challenged are adequately supported by the record, in view of the precedents establishing the scope of review in cases of this type (cited *infra*)

Petitioner contends:

1. That the Commission's Finding that benefits afforded by Petitioner's lamp to the skin and health are not comparable to those afforded by natural sunlight is not only questionable upon its face, but, whatever interpretation is given it, is entirely unsupported by the evidence;

2. That the Finding relating to the effect of treatment by the lamp upon ringworm, athlete's foot, acne, eczema and psoriasis was based upon a false assumption, namely, that the rays of the lamp do not penetrate below the surface of the skin, and is without substantial support in the evidence;

3. That the Finding relating to the effect of treatment by the lamp upon sores and ulcers was based upon the same false assumption, and is likewise unsupported;

4. That the same is true of the Finding relating to treatment of bronchitis by the lamp;

5. That the overwhelming weight of the evidence, including testimony by the Commission's witnesses themselves, was contrary to the Finding that the lamp was incapable of building up resistance to disease, said Finding apparently being based upon nothing but the Complaint;

6. That the same is true of the Finding that the lamp "does not produce any chemical reaction with respect to the blood stream";

7. That the ambiguous Finding concerning building up resistance to infection was not supported by any substantial evidence whatever;

8. That the Finding concerning stimulation to the tissues of the skin is logically unrelated to any of the evidence and wholly unsupported by the record;

9. That the provision of the Order relating to normalizing of body chemistry, improvement of metabolism, and building new tissues is not in accordance with the Findings, and should be corrected to conform thereto;

10. That paragraph 3 of the Order, which depends in part upon preceding provisions, should be set aside or modified to the extent to which such preceding provisions are set aside or modified;

Finally, that the Findings and Order, in the respects above mentioned, should be set aside (except in so far as Petitioner itself offers to conform to certain suggested modifications).

ARGUMENT.

I.

The Product in Question Was Developed, Tried and Proved Over a Period of More Than Ten Years.

HISTORY OF THE BUSINESS.

Petitioner, a California corporation, was incorporated December 18, 1933 [R. 102]. Thomas S. Warren, who was the first witness for the Commission before the trial examiner [R. 100], is General Manager of the company, and has been its President since its incorporation [R. 101].

Prior to that time Mr. Warren was employed by another company in Los Angeles, and while with it he commenced his study of ultra-violet rays in 1929 [R. 115, 391]. He read very extensively [R. 114, 397, 398], worked constantly in the physiotherapy department of the County Hospital for six months [R. 115], cooperated with laboratories and doctors in bactericidal tests [R. 114, 392], and took a night school course from the National School of Physiotherapy, at Los Angeles, graduating in 1931 [R. 115]. In November, 1932, he started in business for himself, under the name of Ultra-Violet Home Products Company, and in December, 1933, he incorporated Petitioner [R. 102, 393]. The therapeutic lamp known as "Life Lite" was first placed on the market in November, 1932 [R. 398], using the same quartz tube as had been used in the Metlox lamps, with which Warren had grown familiar [R. 391, 392].

Over the years, the company has developed a substantial business in the manufacture and sale of ultra-violet lamps for health purposes, and for use in sterilization and in

mining [R. 101]. The sterilization lamps are used in meat boxes, refrigerators, air conditioning rooms, air ducts, bakeries, and other places where their bactericidal effect is desirable. The mining lamps are used for analysis of ores, in laboratories for chemical analysis, and by police departments [R. 101, 102]. The health lamps, known as "Life Lite," were the only ones under attack in this proceeding by the Commission. These lamps, in various models, range in price from \$49.50 to \$130 [R. 400], and from 1932 to the time of the hearing, in May, 1941, the company had sold approximately 3400 of them [R. 102]. Most of the lamps are rented to prospective purchasers before they are sold [R. 399].

THE PRODUCT.

Various types of lamps are used to create ultra-violet rays [R. 113, 114, 162, 316, 317], but those most frequently mentioned in this case are the "hot quartz" and the "cold quartz" types. In each of these, the important element is a tube made of fused quartz. Quartz is used because it transmits the radiation much better than does glass [R. 165]. The hot quartz lamp has a tube with a considerable amount of mercury in it, vaporized in operation by a low voltage, high amperage electrical arc, and giving off ultra-violet rays of high intensity and various wave-lengths [R. 113, 114]. In the cold quartz lamp, the tube is exhausted of all gases, and then filled with a mixture of helium, argon, neon and krypton, with only a small amount of mercury added, and hermetically sealed. In operation, the mercury vapor is ionized by a high voltage, low amperage electrical current, and produces a high intensity of ultra-violet light, most of which is concentrated in the neighborhood of a single wave-length, 2537 ang-

strom units.² All cold quartz lamps are approximately the same in so far as concerns the spectral range of the ultra-violet rays emitted by them, but they vary in potency [R. 163, 209, 318, 319]. Petitioner's lamp, "Life Lite," is of the cold quartz type; it is more properly called a "mercury vapor discharge tube" than a "mercury arc" [R. 162, 163]. Another type of lamp discussed by the witnesses is the so-called sun lamp. It is designed to reproduce, to some extent, at least, the range of ultra-violet radiation that is found in sunlight. The ideal sun lamp would be one which emitted ultra-violet radiation not differing essentially from clearest weather, mid-day, mid-summer, mid-latitude, sea level natural sunlight, but many of the sun lamps on the market depart appreciably from that standard [R. 325, 326].

SCIENTIFIC BACKGROUND.

The electro-magnetic spectrum contains a very broad range of wave-lengths of rays [R. 321]. For present purposes, it is sufficient to notice only some parts of it. Wave-lengths in the infra-red portion run from about 7800 angstrom units to perhaps as long as 150,000; in the visible portion (violet, indigo, blue, green, yellow, orange and red) from about 3900 to approximately 7800; in the ultra-violet from less than 1860 to about 3900. The shortest ultra-violet ray which quartz will transmit is 1860 angstrom units. The longest infra-red rays found in natural sunlight are about 50,000 angstrom units [R. 162].

The range of ultra-violet wave-lengths found in natural sunlight overlaps the range produced by cold quartz lamps.

²The units of measurement commonly used in measuring or classifying wave-lengths of rays in the electro-magnetic spectrum are the millimicron and the angstrom unit. One millimicron equals ten angstrom units [R. 157], and one angstrom unit equals one ten-millionth ($1/10,000,000$) of a millimeter [R. 321].

but the two do not coincide. Most of the rays from cold quartz lamps are shorter than those in sunlight [R. 163]. The sun's ultra-violet spectral range is from about 2910 angstrom units to about 3900 [R. 158]. That of the "Life Lite" lamp, which is the same as that of any standard cold quartz unit, runs from about 2540 (2537)³ to 3660, but 89.2 per cent of the lamp's energy output is concentrated in the region of 2540 angstrom units [R. 119, 120].

Not all ultra-violet rays have biological or actinic (chemical) effects upon the human body. The range from 3900 or 4000 angstrom units to about 3200 is apparently negative [R. 124]. The actinic rays from the sun are in the range from 2900 to 3200 angstrom units [R. 124, 125].

SUCCESS EXPERIENCE.

During Mr. Warren's employment by the Metlox Corporation, in 1929, he took the lamp then being made by that company to the California Institute of Technology, and had it analyzed [R. 391, 392]. He also took it to laboratories in Los Angeles, where bactericidal tests were made with it, and had six or eight doctors using the lamp in their practice, in order to get first-hand information [R. 392]. The identical quartz tube used in the Metlox lamp was later used in the "Life Lite" lamp under attack in this proceeding by the Commission [R. 392]. When Warren started in business as the Ultra-Violet Home Products Company, in 1932, he started to manufacture a lamp with a tube of a slightly different shape, and using a slightly different current, so he took the Model A hand

³Witnesses used 2540 angstrom units as synonymous with 2537, the difference being negligible as a practical matter [R. 245, 268, 325].

lamp to Dr. Wesley Leighton,⁴ a professor and research worker in ultra-violet radiation at Pomona College [R. 393, 394]. There he and Dr. Leighton, working together, measured the ultra-violet output of the lamp, and it checked exactly with the standard output of the cold quartz type lamp [R. 394].

Not content with investigation by others, Warren started, in 1930, to use the lamp consistently in daily treatments upon himself [R. 102, 103]. He observed a beneficial effect upon his general health [R. 103, 105], and used it with repeated success to clear up an athlete's foot condition on his feet [R. 105, 106].

Later, in 1935, Dr. Roger W. Truesdail, whose testimony before the trial examiner in this proceeding will be discussed in more detail later in this brief, performed elaborate experiments, using standard and accepted methods, in his laboratories in Los Angeles, to determine whether the "Life Lite" lamp would cure, or cause recalcification in, rats that had been made rachitic [R. 213-261]. He found that there was a definite healing of rickets in all animals exposed to the lamp [R. 220, 241]. He testified, without contradiction, that the use of ultra-violet light irradiation as an aid in the prevention of rickets in children is a common practice [R. 255].

Ultra-violet lamps are also commonly used in health resorts and physical training offices [R. 369]. It has long been common knowledge that there is a correlation between vitamin D in human beings and ultra-violet rays. *General Baking Co. v. Grocers Baking Co.*, 3 F. Supp. 146, 148 (D. C. W. D. Ky., 1933); *Wisconsin Alumni R. F. v. Vitamin Technologists*, 41 F. Supp. 857 (D. C. S. D. Cal., 1941).

⁴Brother of the Dr. Leighton who testified before the trial examiner.

II.

The Evidence Adduced by the Commission in Support of Its Complaint Was Inconclusive in Character.

Detailed examination of the evidence will come in later sections of this brief, but it may be helpful, at this point, to consider, as a whole, the proceedings before the trial examiner.

The first witness called by the Commission was Thomas S. Warren, President and General Manager of Petitioner [R. 100]. His testimony was devoted largely to matters not here in issue, but he did relate his own personal experience in using the "Life Lite" lamp, including the definite benefits he derived therefrom [R. 102-107]. His testimony in that regard was never contradicted or seriously questioned by other witnesses.

Dr. Samuel Ayres, Jr., was next called. He testified that after graduating from medical school in 1919 with a degree of M. D., followed by internship and some graduate assistant work [R. 129], his practice had been limited to diseases of the skin [R. 129, 132]. By another witness, he was described as one of the most prominent skin men in the city, and well known throughout the country [R. 208]. Petitioner does not question his qualifications as a dermatologist, but his understanding of the "Life Lite" lamp and the therapeutic benefits to be derived from its use is another question. He had used ultra-violet light in his practice for about twenty years, and a lamp of the cold quartz type for approximately eight or ten years [R. 129, 146], but he had not even examined the "Life Lite" lamp [R. 145, 146], and his concept of the spectral range of sunlight as compared to that of the lamp was hazy [R. 149]. He evaded a request for au-

thority in support of his statement that natural sunlight contains rays of the length that emanate from cold quartz lamps, saying that the question was one for a physicist [R. 149], and admitted that that was something about which he was merely speculating, as far as his testimony was concerned [R. 149]. It was his opinion that all disease is properly a subject for treatment or supervision by a physician rather than home treatment [R. 145].

Dr. Fred B. Moor, the third witness for the Commission, was also unacquainted with the "Life Lite" lamp [R. 161]. His specialty had been in the fields of pharmacology, therapeutics and physical therapy [R. 156]. He had used the hot quartz lamp in treating many patients [R. 207], but the clinic with which he was connected used the cold quartz lamp only occasionally [R. 177]. He admitted that he had had very little experience in the use of the cold quartz in general therapy, and that his personal experience was not sufficient to form a basis for an opinion as an expert witness [R. 193]. His testimony was based, in part, upon published statements of the Council of Physical Therapy of the American Medical Association [R. 180], and when he said that treatment by the cold quartz lamp for certain ailments or purposes was "not generally accepted", he meant not accepted by the Council of Physical Therapy [R. 177]. He conceded that, generally speaking, a statement issued by the Council of Physical Therapy in its publication will be based only upon an experience which, to the mind of the majority of the Council, "conclusively establishes that the particular device or product does accomplish a particular result beyond all question" [R. 179]. In order to obtain a statement by the Council favorable to a particular device or treatment, it is necessary that the device or treatment be brought to the

Council's attention and have an established experience of success; hence, many devices have been used successfully for a considerable period of time prior to their being favorably reported upon in a statement of the Council [R. 179, 180].⁵ None of the things that Dr. Moor said were unproved had been disproved, to his knowledge. There is great division of opinion among physicians and research men of high standing in the field of ultra-violet therapy and the use of therapeutic lamps of 2540 or 2537 angstrom units wave-length [R. 205]. According to Dr. Moor, it is the general philosophy of the medical profession that people should not undertake any health measure, other than the ordinary activities of eating and sleeping, except on the advice of a physician [R. 175, 176]. "Physicians are interested in protection of the public, and most of these things, outside of eating and sleeping, are something which may have some potential danger in them" [R. 176].

No other witnesses were produced by the Commission.

The inconclusive and inadequate character of the evidence adduced by the Commission in support of its Complaint is given additional emphasis by consideration of that presented by Petitioner.

Dr. Roger W. Truesdail, the first witness called for Petitioner, was a consulting chemist and consulting nutritionist. In addition to scholastic training at the University of Redlands, the University of Oregon and the University of Washington, and a wide teaching experience in the field of chemistry, he had practiced his profession in Los Angeles since 1931, and was President and a director of labora-

⁵There is no evidence in the record that Petitioner's product, or any cold quartz lamp, has ever come to the attention of the Council of Physical Therapy.

tories working primarily in chemistry and bacteriology [R. 209-211]. During the twelve years prior to the hearing he engaged in study of and experimentation with vitamin D, to determine its presence in animals, sources of it, and processes involving the creation of it [R. 211, 212]. Rats are the animals commonly used in laboratories for vitamin D tests or assays, and Dr. Truesdail had had under his supervision or direct control ten thousand or more of them, used solely for vitamin D work [R. 216]. During the year 1935, he conducted experiments with Petitioner's product, "Life Lite" [R. 213], to determine whether its light would cure, or cause recalcification in, rats that had been made rachitic [R. 215, 216]. His testimony described in detail the technique that was used in the experiments [R. 216-219, 241-243, 257] and the results obtained⁶ [R. 219-241]. The clarity and coherence of his discussion are convincing in themselves, and help to explain why no attempt was made by the Commission to contradict or otherwise impugn his testimony. Dr. Truesdail has himself owned a "Life Lite" lamp, and used it in his own home [R. 213].

Dr. Philip A. Leighton was next called for Petitioner. At the time of the hearing, he was Professor of Chemistry and executive head of the Department of Chemistry at Stanford University. After taking a Bachelor's degree and a Master's degree at Pomona College, California, he took a Master's degree and the degree of Doctor of Philosophy at

⁶There was a definite healing of rickets in all animals exposed to the lamp [R. 220, 241].

Harvard University. He had also studied at the University of Munich, at Johns Hopkins University, at Cambridge University in England, and at the Imperial College of Science in London, and taught at Harvard and, since 1928, at Stanford [R. 266, 267, 313]. His writings in the field of ultra-violet radiation, from 1926 to 1935, had been published in the Journal of the Optical Society of America, the Physical Review, the Journal of Physical Chemistry, the Journal of the American Chemical Society, and the Review of Scientific Instruments [R. 267]. At the time of the hearing there was about to be published under the auspices of the American Chemical Society a book entitled "The Photochemistry of Gases", of which Dr. Leighton was co-author [R. 296].

Ultra-violet light is a subject of continuous research in Dr. Leighton's department at Stanford, and the information he gave at the hearing was the latest available on the subject. He had engaged in that study within a week before he took the witness stand [R. 296]. He was a physical chemist, and his special field of interest had been photochemistry [R. 268], which is the study of the chemical effects of light, including the invisible rays, such as ultra-violet [R. 268]. He had been engaged in the field of photochemistry for eighteen years (*id.*), and the chemical effects of light in the skin had been part of his interest [R. 338]. He had used hot quartz lamps in his experiments, and designed several of his own [R. 346], and also had used Petitioner's product, the "Life Lite", in his studies [R. 284].

Dr. Leighton identified two charts or graphs reflecting information considered basic in the science of photochemistry⁷ [R. 297], and accepted as facts, rather than opinions, by photochemists in general [R. 298]. Those facts are as fundamental in the study of photochemistry as is the law of gravity in the study of physics (*id.*) The Commission's trial examiner first admitted the charts in evidence [R. 270, 286], and then, upon motion of the Commission's attorney, struck them out [R. 303]. The stated purpose of this procedure [R. 273] was to enable the Commission finally to rule, but the record does not reveal what, if any, ruling was made by the Commission.

The final witness for Petitioner (except that during deferred cross-examination of Thomas S. Warren, he became *pro forma* a witness for Petitioner for a short time) was Dr. Floyd Roswell Parks. He was a physician and surgeon, in general practice of medicine and surgery in California since 1929 [R. 358]. He was a graduate of Harvard University in 1925 with the degree of Doctor of Medicine, was a member of the Los Angeles County, the State, and the American Medical Associations, the Los Angeles Surgical Society, a fellow of the American College of Surgeons, and had been associated with the General Hospital, Children's Hospital, St. Vincent's Hos-

⁷The first chart, representing absorption curves of layers of the skin and the absorption curve of ergosterol, as functions of wave lengths of ultra-violet rays, was marked "Respondent's Exhibit 2" [R. 269]. Petitioner here was, of course, designated "Respondent" in the hearing before the trial examiner. The second chart, showing relative efficiencies of different wave lengths of ultra-violet light in the production of erythema, vesiculation of paramercia, and bactericidal action, was marked "Respondent's Exhibit 3" [R. 275].

pital, Queen of Angels Hospital, and Hollywood Hospital [R. 358, 359]. He specialized in general surgery, and was not primarily a physiotherapist [R. 372, 374]. However, he had used ultra-violet light in his practice since 1933 [R. 359, 369, 370], at which time the cold quartz type of lamp was just coming on the market [R. 389]. He was familiar with the type of light, of 2537 angstrom units wave-length, emanating from cold quartz lamps, and had observed the results of that light upon the human body [R. 359]. He had not personally applied the lamp in treatment of patients [R. 375], preferring to send them to physiotherapy departments of hospitals [R. 371-373, 382, 384, 388], but had studied its use in the treatment of disease, and its effect upon human health [R. 359]. He was familiar with the "Life Lite" lamp, manufactured by Petitioner [R. 359, 360], had found it to be very beneficial, and recommended it to his patients [R. 360, 388]. He described in some detail an actual case in which he advised the use of one of Petitioner's lamps on a patient, and conspicuously good results followed the treatment [R. 361, 367, 368].

At the conclusion of Petitioner's evidence the Commission produced no rebuttal, and the case was closed for the taking of testimony.

III.

The Portions of the Commission's Findings and Order Here in Issue Were Without Substantial Support in the Evidence.

SCOPE OF REVIEW.

Section 5 of the Federal Trade Commission Act, as amended (Title 15, U. S. C. 1040 ed., Sec. 45), provides: "The findings of the Commission as to the facts, if supported by evidence, shall be conclusive."

It is well settled that the word "evidence", as used in the statute, means *substantial* evidence. Construing the same provision—identical in wording except that "Board" is substituted for "Commission"—in the National Labor Relations Act (Title 29, Sec. 160 (e), U. S. C. 1940 ed.), the Supreme Court, in *National Labor Relations Board v. Columbian Enameling and Stamping Co.*, 306 U. S. 292 (1939), said (pp. 299, 300):

Section 10 (e) of the Act provides: ". . . The findings of the Board as to the facts, if supported by evidence, shall be conclusive." But as has often been pointed out, this, as in the case of other findings by administrative bodies, means evidence which is substantial, that is, affording a substantial basis of fact from which the fact in issue can be reasonably inferred. *Washington, V. & M. Coach Co. v. National Labor Relations Board*, 301 U. S. 142; *Consolidated Edison Co. v. National Labor Relations Board*, 305 U. S. 197; *Appalachian Electric Power Co. v. National Labor Relations Board*, 93 F. 2d 985, 989; *National Labor Relations Board v. Thompson Products Inc.*, 97 F. 2d 13; *Ballston-Stillwater Knitting Co. v. National Labor Relations Board*, 98 F. 2d 758, 764. Substantial evidence is more than a

scintilla, and must do more than create a suspicion of the existence of the fact to be established. "It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion," *Consolidated Edison Co. v. National Labor Relations Board*, *supra*, p. 229, and it must be enough to justify, if the trial were to a jury, a refusal to direct a verdict when the conclusion sought to be drawn from it is one of fact for the jury. See *Baltimore & Ohio R. Co. v. Groeger*, 266 U. S. 521, 524; *Gunning v. Cooley*, 281 U. S. 90, 94; *Appalachian Electric Power Co. v. National Labor Relations Board*, *supra*, 989.

To the same effect, see *Consolidated Edison Co. v. National Labor Relations Board*, 305 U. S. 197 (1938), and *Neff v. Federal Trade Commission*, 117 F. (2d) 495 (C. C. A. 3, 1941). In the case of *Gunning v. Cooley*, 281 U. S. 90 (1930), cited *supra* in the *Columbian Enameling and Stamping Co.* case, the Court discussed the *quantum* of evidence sufficient to send a case to a jury, and said, in part (p. 94) :

"A mere scintilla of evidence is not enough to require the submission of an issue to the jury. The decisions establish a more reasonable rule "that in every case, before the evidence is left to the jury, there is a preliminary question for the judge, not whether there is literally no evidence, but whether there is any upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the onus of proof is imposed." *Improvement Company v. Munson*, 14 Wall. 442, 448. *Pleasants v. Fant*, 22 Wall. 116, 122.

* * * * *

Where the evidence upon any issue is all on one side or so overwhelmingly on one side as to leave no

room to doubt what the fact is, the court should give a peremptory instruction to the jury. *People's Savings Bank v. Bates*, 120 U. S. 556, 562. *Southern Pacific Company v. Pool*, 160 U. S. 438, 440.

In order to determine in any particular case whether or not the evidence supporting the findings is substantial, it is necessary, of course, to examine the record as a whole. Such is the practice of the courts, well exemplified in *International Shoe Company v. Federal Trade Commission*, 280 U. S. 291 (1930). There, the Court had before it a proceeding under section 7 of the Clayton Act, and the case turned upon the question of the existence of substantial competition between International Shoe Company and the corporation whose stock it had acquired. In part, the Court said (pp. 297, 299):

The rule to be followed is stated in *Federal Trade Comm'n v. Curtis Co.*, 260 U. S. 568, 580:

“Manifestly, the court must inquire whether the Commission’s findings of fact are supported by evidence. If so supported, they are conclusive. But as the statute grants jurisdiction to make and enter, upon the pleadings, testimony and proceedings, a decree affirming, modifying or setting aside an order, the court must also have power to examine the whole record and ascertain for itself the issues presented and whether there are material facts not reported by the Commission. If there be substantial evidence relating to such facts from which different conclusions reasonably may be drawn, the matter may be and ordinarily, we think, should be remanded to the Commission—the primary fact-finding body—with direction to make additional findings, but if from all the circumstances it clearly appears that in the interest of justice the controversy should be decided without

further delay the court has full power under the statute so to do. The language of the statute is broad and confers power of review not found in the Interstate Commerce Act.”

* * * * *

In addition to the circumstances already cited, the officers of the International testified categorically that there was in fact no substantial competition between the companies in respect of these shoes, but that at most competition was incidental and so imperceptible that it could not be located. The existence of competition is a fact disclosed by observation rather than by the processes of logic; and when these officers, skilled in the business which they have carried on, assert that there was no real competition in respect of the particular product, their testimony is to be weighed like that in respect of other matters of fact. And since there is no testimony to the contrary and no reason appears for doubting the accuracy of observation or credibility of the witnesses, their statements should be accepted.

Also illustrative are *Neff v. Federal Trade Commission*, 117 F. (2d) 495 (C. C. A. 3, 1941), and *Kidder Oil Co. v. Federal Trade Commission*, 117 F. (2d) 892 (C. C. A. 7, 1941). The proceedings leading up to the Commission's order in the *Kidder Oil Co.* case were similar in many respects to those in this case. The Commission relied largely upon an exhibit—an old report of tests made by the United States Bureau of Standards—and testimony of two expert witnesses. The oil company produced experts who had made actual experiments. The Court said, in part (p. 899):

A study of the record is convincing that the overwhelming weight of the testimony is contrary to the

Commission's contention, and under such circumstances, it occurs to us that the Commission would have discerned the importance, and perhaps the necessity, of making such tests and experiments as would demonstrate, at least to a reasonable certainty, the validity of the charge which it had the burden of sustaining. * * * Thus, all through this letter, as in Exhibit 19, and the testimony of Brooks and Dill, the information (if it may be called such) is what graphite may or might do, rather than what it does or does not do. Information of such a speculative and uncertain nature can afford little, if any, support to findings based thereon. * * * We recognize that our province is not to weigh the testimony, but we think it is not inappropriate to briefly refer to some of the direct positive testimony which contradicts many of the uncertain statements made by the witnesses relied upon by the Commission, and the inferences indulged in by such witnesses.

Accordingly, with respect to each part of the findings and order of the Commission here in issue, all of the evidence bearing upon such part should be examined, with a view to ascertaining whether such part finds therein substantial support in the legal sense.

1. *Benefits Comparable to Those of Sunlight.*

The Complaint alleged [Par. Five; R. 7, 8] that Petitioner's lamp "will not give benefits to the skin and to the general health of the individual comparable to that given by natural sunlight for the reason that the ultraviolet rays emitted therefrom are not, in turn, comparable to the ultraviolet rays emitted by natural sunlight." The Commission found [Findings, Par. Six; R. 91] that the

“benefits afforded by [Petitioner’s] lamp to the skin and to the general health cannot properly be compared with those afforded by natural sunlight because of the wide variation between the rays emanating from the two sources.” The next sentence went on to recite that rays emitted from natural sunlight range from 2900 angstroms in the ultra-violet rays to approximately 50,000 angstroms in the infra-red rays. Upon the basis of this Finding, Petitioner was ordered to desist from disseminating advertisements representing that its product “affords benefits to the skin or to the general health of the user comparable to those afforded by natural sunlight” [Order, Par. 1 (a); R. 96].

Close consideration of the key words “comparable” and “compared”, in the passages just quoted, reveals an ambiguity of potential importance. Webster’s New International Dictionary, Second Edition, Unabridged (1941), defines “comparable” as follows: “*Capable* of being compared (with); *worthy* of comparison (to).” To like effect, Funk & Wagnalls New Standard Dictionary of the English Language (1939): “That *may* be compared; *fit* to be compared.” The New Century Dictionary (1930): “*Capable* of being compared; *worthy* of comparison.” (Italics supplied.) In using the word “comparable” in its Complaint and Order, what did the Commission mean? Did it mean (a) capability or possibility of comparison, or (b) worthiness of or fitness for comparison? So with the word “compared”: its present tense form, “compare”, may mean “To examine character or qualities of, as of two or more persons or things, for the purpose of discovering their resemblances or differences” (Webster, *supra*); “To examine (two or more persons or things) with reference to points of likeness or unlikeness; place

together, literally or mentally, so as to perceive similarity or dissimilarity, as of property or relations" (Funk & Wagnall, *supra*); "bring together, one with another, for the purpose of noting the points of likeness and difference" (Century, *supra*); or it may mean "To represent as similar as for the purpose of illustration; to liken; . . . followed by *to*; as, to *compare* men to rats" (Webster, *supra*); "To represent or speak of as similar, analogous or equal; liken: with *to*; as, to *compare* wisdom *to* gold" (Funk & Wagnall, *supra*); "To represent as similar or analogous (*to*); liken" (Century, *supra*). In using "compared" in the finding above quoted, did the Commission mean that benefits afforded by Petitioner's lamp and benefits afforded by sunlight could not be examined or brought together mentally so as to perceive similarities or dissimilarities, or did it mean that such benefits from the two respective sources could not be spoken of as similar, or likened?

As used in the passage quoted from the Complaint, the fact that "comparable" is followed by "to", in each of the two places where it is used, would seem to point toward the concept of worthiness of or fitness for comparison. Yet to talk of ultra-violet *rays* from one source as being "unfit" to be compared, or "unworthy" of comparison, with ultra-violet rays from another source would undoubtedly be so absurd as to arouse the mirth of the men of science who testified at the hearing. In the Complaint, therefore, "comparable" must mean capable of being subjected to the mental process of perception of resemblances and differences. The same reasoning applies to "compared", as used in the Findings; the only reasonable interpretation of the juxtaposition of the sentence relating to benefits and the sentence relating to wave-lengths of light rays is that the former states a conclusion drawn

from the latter (in conjunction with the preceding subparagraph of the Findings), and it seems clear that comparing light rays with each other in terms of their wave-lengths in angstrom units is not the same process as likening men to rats or wisdom to gold. It follows, of course, that “comparable” was used in the Order in the same sense; otherwise that part of the Order did not follow the Complaint and Findings, and hence was improvident, and should be annulled. *Federal Trade Commission v. Gratz*, 253 U. S. 421, 427, 40 S. Ct. 572, 574, 64 L. Ed. 993 (1920); *Wrisley Co. v. Federal Trade Commission*, 113 F. (2d) 437, 442 (C. C. A. 7, 1940).

But if the foregoing reasoning is sound, *i. e.*, if “comparable” and “compared” are used by the Commission as relating to measurability of mutual characteristics or qualities by common standards rather than as relating to worthiness or fitness, the very definition demonstrates the invalidity of the finding in question, for, from the beginning of the proceeding to the end, the parties, the attorneys and the witnesses did little else (as far as this particular issue is concerned) but “compare” the wave-lengths of the ultra-violet rays of the lamp with the wave-lengths of the ultra-violet rays of the sun, in terms of spectral ranges measured in angstrom units [Complaint, Par. Five, R. 7; Findings, Par. Six, R. 90; and see references under “Scientific Background”, *supra*], and “compare” the effects of the lamp’s rays with the effects of the sun’s rays, in terms of production of erythema⁸ [R. 108, 283, 309, 327, 379], bactericidal action [R. 163, 188, 189, 282, 289, 290, 292, 295, 310, 336, 356, 357], production of vitamin D, and the beneficial results of that production [R. 254, 281-283, 292,

⁸Erythema is the medical term for sun burn [R. 108].

303, 304, 329, 330, 349, 350, 355, 356], vesiculation⁹ [R. 280, 283], and tanning [R. 132, 133, 282].

On the other hand, if it be assumed for the sake of argument that the Commission used “comparable” and “compared” in the sense of worthiness or fitness, an obvious *non sequitur* appears on the face of the Complaint and Findings. From the fact that the spectral range of ultra-violet light emitted from the “Life Lite” lamp differs in part from the spectral range of ultra-violet rays found in sunlight, it does not follow that there is any difference in beneficial effects of the rays as between the two sources. The mere statement of the contrary contention shows the fallacy. It is clear that, in fact, differences between effects of the principal biologically active band in the “Life Lite” spectrum and effects of the biologically active ultra-violet bands in sunlight are relative, and not specific [R. 289, 290, 295, 311, 312, 313, 328, 336, 353, 354].

However, it is not necessary to rely upon logomachy. Even if the Commission used the words in question indiscriminately, and regardless of the possible variant meanings, Petitioner submits that the Finding still lacks substantial support in the record. In response to a leading question, Dr. Ayres advanced the bald opinion that he did not think that a lamp such as Petitioner’s would give benefits to the skin comparable to those given by general sunlight [R. 132]. When asked about benefits to general health, as distinguished from skin, he replied [R. 133]: “From direct personal observation, I am not able to answer the question, but from general impression and from literature, I would say that it probably has not the same

⁹Vesiculation is the biological phenomenon which results in, and is usually observable as, blistering [R. 283].

effect that you would get from the sunlight, in particular, that you lack the tanning procedure, and that is considered to be intimately connected with certain of the benefits of the natural sun." The question had been whether the lamp would give a benefit *comparable* to that given by natural sunlight [R. 132]. At other points, when asked if the lamp would make an improvement in the metabolism, he replied that he did not believe one could expect to get the "same" effect from this type of radiation as from natural sunlight [R. 141, 142], and, concerning activation of vitamin D in the human body, he said he did not think the amount produced by cold quartz light would be "so much" as is produced by natural sunlight [R. 150]. Aside from its evasiveness, testimony of this character would hardly seem to be satisfactory as a foundation for an order which might have drastic economic consequences to Petitioner. Testimony of the other expert witness for the Commission, Dr. Moor, did not use the words "comparable" or "compared". When asked to state the difference in effect as between the shorter rays from cold quartz lamps and rays of natural sunlight, he replied [R. 163]: "Well, the shorter rays are much more irritating to the skin. They are bactericidal, more bactericidal than sunlight. They do not have the same biological effects as sunlight." What he meant by "same" is not clear, since, a short time later, he referred to the maintaining of phosphorus and calcium of the body and inhibition of rickets as proven benefits from devices such as Petitioner's product [R. 173]. Such benefits are, of course, derivable from sunlight [R. 254, 292, 329, 349, 350]. As to the bactericidal action, there was read to him this statement, concerning the ultra-violet ray of 2537 angstrom units wave-length: "In regard to the bactericidal effect

it does not differ from rays of longer or shorter wave length," and he said the statement was correct [R. 188, 189].

The lack of substance in the remarks of the Commission's experts appears more sharply by comparison with the clear and convincing testimony of Drs. Truesdail and Leighton.

After describing in detail his experiments with Petitioner's lamp upon rachitic rats, and the definite healing of rickets in the animals [R. 220-243], Dr. Truesdail testified upon cross-examination as follows [R. 254]:

"Q. In your opinion, would the use of respondent's device have the same effect in preventing rickets and related diseases as natural sunlight would have, or would there be any difference? A. Well, I would say that for the actual calcium and phosphorus metabolism, the light, the artificial light, is more effective than the natural sunlight, because it possesses a biological band in larger relative quantities even than sunlight.

Q. You mean the shorter rays would be more effective? A. Yes, that is true. You can put food out in the sunlight and put milk out there, and you don't get a creation of very much vitamin D, but you can take an artificial source and produce vitamin D in it."

To the same effect: *Wisconsin Alumni R. F. v. Vitamin Technologists*, 41 F. Supp. 857, 865 (D. C. S. D. Cal., 1941).

Equally direct and to the point was the testimony of Dr. Leighton. First explaining his basic charts,¹⁰ and pointing out that the shortest wave length of ultra-violet light found in the solar spectrum is usually between 2900 and 3000 angstrom units [R. 279], he proceeded to compare the effects of ultra-violet rays of 2537 angstrom units, such as are emitted from the "Life Lite" lamp, with effects of ultra-violet rays found in the light of the sun (or of sun lamps). Both sun lamps and lamps emitting

¹⁰Exhibit 2, the chart showing absorption of ultra-violet rays by layers of the skin and by ergosterol [R. 269], contained four curves, or graphs. The one marked "ergosterol" shows that absorption by the substance, ergosterol (the substance which, when exposed to ultra-violet irradiation, produces vitamin D—R. 346, 347) is approximately the same at 2537 angstrom units as at 3000 angstrom units [R. 303, 304]. The one marked "corneum" (the outer or horny layer of the skin—R. 304) shows that absorption by that layer of the skin is "slightly greater at 2537, but not markedly greater" than at 3000 angstrom units [R. 304]. The one marked "granulosum" (the skin layer underlying the corneum—R. 305) shows that absorption by that layer, also, is "slightly greater at 2537, but not markedly different" from absorption by it at 3000 angstrom units [R. 305]. The line marked "germinativum" (underlying the granulosum—R. 305) shows that absorption here, also, is "slightly greater at 2537" than at 3000 [R. 306]. The curve for "corium," the fourth layer (underlying the germinativum, R. 306, and the one in which ergosterol is chiefly found [R. 307, 347], and the vitamin D activity is produced R. 306) also shows that absorption by that layer is "slightly greater" at 2537 angstrom units than at 3000 [R. 306, 307].

Exhibit 3, the chart showing relative efficiencies of different wave lengths of ultra-violet light in the production of erythema, vesiculation of paramedea, and bactericidal action [R. 275], contained three curves. The one for erythema (synonymous with sunburn; it is questionable whether erythema in itself is beneficial, but to produce the known beneficial effects, which are not visible to the eye, erythema, which is visible, must also be produced—R. 327) shows that the 2537 angstrom unit wave length is a little more efficient than 3020 [R. 282] and much more efficient than 3100 [R. 309]. The vesiculation curve (vesiculation was accepted as a criterion of the death of a single cell or single-celled organ, R. 277; in human skin it is observable as blistering, R. 283) shows that the vesiculation power of the 3000 angstrom unit wave length is "somewhat higher than at 2537, but not markedly different" [R. 310]. The line for bactericidal action shows that efficiency at 2537 is "considerably higher" than at 3000 [R. 310].

In order to determine the net effect of any wave length upon any particular cells in the human skin, it is necessary to consider the information shown by both charts, because such net effect will depend upon (a) the amount of light which reaches those cells, and (b) the efficiency of the wave length [R. 280, 313, 343].

The two charts are reproduced at pages 271 and 287 of the printed Transcript of the Record.

rays of 2537 angstrom units wave length will produce erythema, both will produce increased vitamin D activity, and both have a bactericidal and vesiculation action [R. 281]. In a practical way, the chief effect that one would obtain from the ordinary sun lamp would be a coat of tan, and the chief effects that one would obtain from rays of 2537 angstrom units would be an increased vitamin D activity, erythema and bactericidal action [R. 282]. The only definitely established beneficial effects of natural sunlight and sun lamps are increased vitamin D activity and bactericidal action [R. 330], and that is also true of cold quartz type therapeutic lamps [R. 356].¹¹ Specific effects produced upon the human being by 2537 angstroms are also produced by sunlight, and those produced by the ultra-violet in sunlight are also produced by 2537 angstroms [R. 295, 311, 336, 353], except as to tanning, which is of doubtful benefit [R. 335, 336]. There are relative differences, but no specific differences [R. 289, 295]. The cold quartz lamp is more efficient in its bactericidal effect [R. 336, 357]. To obtain the same results by the use of the cold quartz lamp, it would not be necessary to expose the skin as long with the natural sunlight or the average commercial sun lamp [R. 355]. In cases of human beings irradiated by wave-lengths of 2540 angstrom units and of 3000 or thereabout, results will be determined by, first, the relative intensities of the sources used; second, the relative absorption by skin layers for the different wave lengths; and, third, the relative absorption by such substances as ergosterol [R. 313]. As these things are true of cold quartz type lamps, in general, so

¹¹The more particular effects discussed in succeeding sections of this brief fall into one or the other of these two general categories of beneficial effects.

also are they true of Petitioner's product, in particular. Comparing results from a short exposure with a "Life Lite", sufficient to produce erythema, with results from exposure to the sun for a long enough period of time to produce the same erythema, the amount of vitamin D activation would be about the same for each source, and Petitioner's product would have a greater bactericidal action [R. 292, 336, 349, 350]. Exposure to a cold quartz lamp, used according to directions for the use of the "Life Lite" hand model, would give a greater beneficial effect than would exposure to sunlight for the same length of time [R. 329].

Considering the evidence upon this issue, as a whole, Petitioner submits that it overwhelmingly compels the conclusion that the parts of the Commissioner's Finding and Order last above quoted are entirely unsupported by the record, and should be set aside.

2. *Ringworm, Athlete's Foot, Acne, Eczema, Psoriasis.*

The Complaint alleged that Petitioner had represented that the use of its lamp "provides a cure, remedy or competent and adequate treatment for . . . ringworm . . . athlete's foot, acne, eczema, psoriasis, . . . and that it will give relief in all of such conditions, diseases and ailments" [Par. Four, R. 6]; it alleged, further, that the therapeutic value of Petitioner's lamp "is limited to the possible destruction of bacteria when present on the surface of the skin and it would be of no value in the treatment of . . . ringworm . . . athlete's foot, acne, eczema, psoriasis . . ." [Par. Five, R. 8]. The Commission found as follows [Par. Seven, R. 91]:

While ultra-violet rays of the wave length emitted by [Petitioner's] lamp possess bactericidal properties,

such properties are effective only in those cases where the infection sought to be attacked is limited to the surface of the skin. The rays are incapable of penetrating the surface of the skin and destroying bacteria or fungi present below the surface. The use of [Petitioner's] lamp therefore does not constitute a cure or remedy or a competent or adequate treatment for such conditions as . . . ringworm, athlete's foot, acne, eczema, psoriasis . . ., all of which are due to causes existing below the surface of the skin.

and thereupon ordered Petitioner to cease and desist from representing "that said lamp constitutes a cure or remedy or a competent or adequate treatment for . . . ringworm, athlete's foot, acne, eczema, psoriasis" [Par. 1 (b), R. 96].

The validity of these parts of the Findings and Order depends in large part upon proper evaluation, according to the evidence, of the bactericidal action of the "Life Lite" lamp.¹² Such evaluation requires consideration of the extent to which rays from the lamp penetrate the human skin.

Dr. Ayres had little to say about penetration of the skin by the rays, merely volunteering the remark that most of the rays of the light are filtered out by the upper skin layers [R. 140]. Dr. Moor was rather insistent that the rays have very little penetrating power [R. 164, 167], and do not reach below the surface of the skin [R. 167], but,

¹²Throughout all of the discussion in this brief, it should be borne in mind, of course, that the establishment of divisions and subdivisions of the argument is, to some extent, artificial, resulting from the practical necessity of classification by topics, and does not mean that, in fact, any particular chemical or biological effect of the use of Petitioner's product is unrelated to other effects.

upon cross-examination, he admitted that he did not know whether they penetrate deep enough to reach the blood stream [R. 185, 186], nor the exact depth of penetration [R. 188]. He agreed that they have enough penetrating power to produce biologic and photochemical effects [R. 188, 201], and that in regard to bactericidal effect, they do not differ from rays of longer or shorter wave length [R. 188, 189].

Dr. Leighton, on the other hand, went into the subject with care and precision. He discussed the absorption of ultra-violet light by each of the four outer layers of the skin [R. 304-307, 339-343], mentioned that in the spectral range, 2500 to 3050 angstrom units, no marked differences in penetration are found [R. 339], the relative absorption of the four layers at 2537 angstroms being about the same as at 3000 angstroms [R. 342], and stated that the cold quartz lamp was the most efficient source of ultra-violet rays that had yet been developed, as far as bactericidal action was concerned [R. 344]. Ultra-violet light from the sun or from an ideal type of sun lamp would penetrate into the corium layer of the skin [R. 331], and the penetration of rays of 2537 angstroms into that layer would be only about seven-tenths as great as the penetration of rays of 3000 angstroms into that layer [R. 332, 333, 342, 345], but the cold quartz light would be much more efficient in the bactericidal effect [R. 331, 336, 343]. "The net result would be that the bactericidal action of the cold quartz lamp for bacteria in the corium should be greater than that of sunlight for bacteria located in the corium" [R. 343].

Speaking specifically of the diseases last above mentioned, the witnesses again had various opinions to offer.

Ringworm: Dr. Ayres thought that lamps such as Petitioner's would be of "very little" value in ringworm, because the spores of ringworm are very resistant to therapeutic measures [R. 135]. Dr. Moor said, without elaboration: "I doubt if it would be of value in ringworm, although I wouldn't want to be too sure of that" [R. 168]. Dr. Parks testified positively that the lamp was very useful in the treatment of ringworm, because one treatment would usually clear it up [R. 366]; ringworm is fairly common in the Los Angeles area, and one exposure to the cold quartz lamp usually is enough [R. 384, 385].

Athlete's foot: Thomas S. Warren testified without contradiction that he had used the lamp a number of times for treating an athlete's foot condition on his own feet, and had cleared it up every summer when the condition recurred [R. 105, 106]. Dr. Ayres did not believe that the light by itself was likely to produce a cure in a condition like athlete's foot [R. 134], or would be useful in the treatment of athlete's foot [R. 135, 136]. He doubted that it would be of any value [R. 136]. Dr. Moor said it would be of no value, because the organism which produces the fungus which produces athlete's foot has a tendency to burrow deep into the skin [R. 168]. Dr. Parks answered categorically that the lamp is useful in the treatment of athlete's foot and other fungus infections [R. 366]; practically everybody has athlete's foot, and he has found that patients have used this lamp with benefit; he does not even have those patients come to his office, except for the one time to make the diagnosis; it is a relatively chronic disease and rather persistent, and the cold quartz does help; in one case, which had lasted for a

number of months, two treatments with the cold quartz completely eliminated the condition [R. 385, 386].

Acne: Dr. Ayres thought the lamp "would be of very little value" in the treatment of acne; he volunteered an argumentative explanation of the cause of acne, and concluded that he "would say that its effect in acne would be very small," although it "is sometimes used as a supplement to other forms of treatment" [R. 136, 140, 145]. He prescribes the use of cold quartz lamps in his own office, in conjunction with other things, for a limited number of cases of acne [R. 152, 153]. Dr. Moor also would say that the lamp would be "of little value in acne"; "it may produce some slight temporary improvement, but not permanent," in the lessening of the number of pustules, but the best recognized treatment is x-ray therapy [R. 170].¹³ Dr. Parks stated unqualifiedly that the lamp does

Eczema: As to this ailment, also, Dr. Ayres did not believe that the light by itself is likely to produce a cure [R. 134], although it "may be of some temporary value in eczema" [R. 137]. Dr. Moor fell back upon his own preferred formula, saying that the lamp was "not usually considered" of any value in eczema [R. 171], but, upon cross-examination, agreed that if the lamp is used in eczema it is "of especial value in the less acute and more chronic forms" [R. 195, 196]. Dr. Parks pointed out that "chronic eczema" is a rather general term or category, and usually means a condition of unknown cause, but stated flatly that in "most of those instances the therapeutic lamp does relieve the patient and he gets rid of his

¹³Dr. Moor had never used the cold quartz lamp for acne [R. 177].
have use in the treatment of mild acne [R. 366].

eczema. Whatever causes it, you don't know, but it certainly is an adjunct, and in a good many of those cases will completely eradicate the condition [R. 366].

Psoriasis: When asked what would be the therapeutic value of a device such as Petitioner's lamp, Dr. Ayres replied, in part, that "it is particularly beneficial where one desires to secure a prompt erythema without peeling, such, for instance, as in . . . perhaps some cases of psoriasis." He added that he did not believe that the light by itself is likely to produce a cure in conditions like psoriasis [R. 134]. He thought that "an acute case of psoriasis would be definitely aggravated by using ultra-violet light sufficient to produce an erythema. On the other hand, chronic psoriasis, where there are long standing thickened patches, could be definitely benefitted by ultra-violet light of either type, although again I feel the hot quartz is preferable" [R. 138, 145]. Dr. Ayres prescribes the use of cold quartz in his own office, under his own supervision, in conjunction with other things, in a limited number of cases of psoriasis [R. 152, 153]. Dr. Moor, curtly and without explanation, said that "this particular lamp" [with which he was not familiar—R. 161] is of no value in the treatment of psoriasis [R. 171]. Dr. Parks agreed with Dr. Ayres that the lamp should not be used in an acute case, but testified that in a chronic case "it is exceedingly beneficial" [R. 367].

The Commission's Finding, quoted above (pp. 39, 40), is expressly based upon the notion that the rays of the lamp do not penetrate below the surface of the skin. This conclusion completely ignores the general effect of the testimony as a whole, and particularly the testimony of Dr. Leighton, who was so plainly master of his subject that none of the witnesses undertook to contradict him in any

detailed way, and the Commission made no effort to offer any rebuttal. By comparison with the scientific exactness of Dr. Leighton, and the matter-of-fact narration of Dr. Parks based upon his own observations (to say nothing of the various admissions by Drs. Ayres and Moor of the utility of the lamp!), the merely doubting and belittling remarks of Dr. Ayres and the sometimes equivocal, sometimes overpositive statements of Dr. Moor cannot be deemed to constitute any substantial support for the finding.

3. *Sores and Ulcers.*

The Commission found, further [Findings, Par. Seven, R. 91], that: "In the case of sores and ulcers, the lamp may possibly stimulate the healing process but only in those instances in which the infection causing the condition is confined to the surface of the skin." Accordingly, the order required Petitioner to cease and desist from disseminating advertisements representing that its lamp "constitutes a cure or remedy for sores or ulcers, or that it constitutes a competent treatment therefor except in so far as it may stimulate the healing process in those cases in which the infection causing such conditions is confined to the surface of the skin" [Par. 1 (c), R. 96].

This Finding appears to have been based almost entirely upon the testimony of Dr. Ayres. In his opinion, the bactericidal action of Petitioner's lamp would be confined "chiefly" to staphylococcus and that type of bacteria which is right at the very surface of the skin [R. 134]. In the treatment of bacterial skin diseases, he thought such a device would be "probably of slight benefit" [R. 139]. In those infections which are deeper, and below the surface of the skin, he did not think the lamp would have any

particular value, because most of the rays are filtered out by the upper skin layers [R. 140]. He did not think that it would be "of very much value" in the treatment of sores, "using the term in its general scope" [R. 143]. But he conceded that the lamp might stimulate the formation of new granulation tissues in some ulcerations [R. 135, 140], although "one would have to know what the ulcer was caused by" [R. 138], and stated that he prescribed the use of the cold quartz lamp in his own office, under his own supervision and in conjunction with other things, for certain types of chronic ulcers [R. 152, 153].

Dr. Moor, the other Commission expert, also thought that rays emanating from Petitioner's lamp would be useful "chiefly" for very superficial infections [R. 164], and might be of value in the treatment of sores or ulcers, as a stimulating effect to hasten healing, although, in his opinion, the lamp would not heal them by itself [R. 171]. Dr. Parks testified positively that the lamp has value in the treatment of varicose ulcers [R. 367].

It is noteworthy that both of the Commission's witnesses based their opinions as to the superficiality of the bactericidal effect of the lamp upon their further opinions as to lack of penetration by the rays into the skin [R. 140, 164]. On the other hand, all the witnesses agree that activation of vitamin D in the body is produced by rays from the cold quartz lamp [R. 150, 182, 188, 243, 290, 364], and, according to the uncontradicted and unquestioned testimony of Dr. Leighton, that activation takes place in the corium layer of the skin, which underlies three other distinct layers [R. 304-307]. It is certain, therefore, that at least some of the rays penetrate through at least three layers of the skin and effectively into the fourth, and the above-mentioned opinions of Drs. Ayres and Moor are of little assistance, to say the least.

4. *Bronchitis.*

The Commission found [Findings, Par. Seven, R. 92] that Petitioner's lamp "possesses no therapeutic value in the treatment of . . . bronchitis . . ." and therefore ordered Petitioner to cease and desist from advertising "that said lamp possesses any therapeutic value in the treatment of . . . bronchitis . . ." [Order, Par. 1 (d), R. 96].

The record is practically barren of testimony supporting this Finding. There were merely disparaging remarks by the Commission's experts, such as that the lamp "has a very limited field of usefulness" [R. 134], or that it would be of value in the treatment of impetigo and pityriasis rosea and for its influence on calcium metabolism, but "that would be about the limit" [R. 208], but the only evidence for the Commission expressly relating to bronchitis came from Dr. Moor and his opinion that the lamp would have "no direct effect on bronchitis" [R. 167] was based upon his notion that the rays from the lamp "do not reach below the surface of the skin [R. 167]. As pointed out in the next preceding section of this brief, that premise is not correct. It follows that the Doctor's conclusion is dubious on its face. Moreover, considering his careful phraseology, it seems fair to infer that even he did not care to deny that the *indirect* effects of use of the lamp have therapeutic value in the treatment of bronchitis.

On the other hand, Dr. Parks, on the basis of his own experience and investigation, and not merely theorizing, testified positively that the lamp was a beneficial adjunct in the treatment of bronchitis [R. 365, 381-383].

It is submitted that this condition of the record fails to furnish that substantial support for the finding which is required by the established rule of law (see "Scope of Review," *supra*, pp. 26-30).

5. *Resistance to Disease.*

In connection with the Commission's Finding [Findings, Par. Seven, R. 92] that Petitioner's product "is incapable of building up in the body resistance to disease", and the part of its Order forbidding Petitioner to advertise "that said lamp builds up in the body resistance to disease" [Par. 1 (f), R. 96], it again appears desirable to define the subject-matter of the controversy.

The word "disease" has broad meaning. Funk & Wagnall's New Standard Dictionary of the English Language (1939) gives, among other meanings: "Any departure from, failure in, or perversion of normal physiological action in the material constitution or functional integrity of the living organism. 2. Morbid condition resulting from such disturbance or failure of physiological functions." The definitions in Webster's New International Dictionary, Second Edition, Unabridged (1941), and in The New Century Dictionary (1930), are somewhat differently phrased, but equally as broad.

In view of the wide and general significance of the word, "disease", Petitioner has no desire to advertise that its lamp will build resistance to *all* disease—in fact, in its Brief before the Commission, Petitioner offered, in substance, to limit its advertising in this respect to disease related to calcium-phosphorus metabolism or vitamin D activation—but the effect of the Commission's order is to forbid advertising that Petitioner's product will build re-

sistance to *any* disease, and such an order is devoid of any support whatever in the record.

Dr. Ayres contented himself with brief and cautiously guarded speculation to the effect that the question whether use of the lamp would build such resistance would be difficult to prove, one way or the other [R. 141]. The other Commission expert, Dr. Moor, started bravely [R. 172] by stating that the lamp would have no tendency to build up resistance in the body against disease because ultra-violet radiation had not been shown to have the effect of stimulating formation of white blood cells—a matter not in issue before the Commission—but, upon cross-examination, he admitted that rickets, a calcium deficiency disease, is benefitted by use of cold quartz light [R. 184], that children are debilitated by rickets, and that might predispose them to other diseases (*id.*), that calcium deficiency in the blood gives rise to various nervous and muscular diseases, sometimes including heart disease [R. 183], that calcium deficiency diseases are among the serious diseases with which the human race is afflicted, and calcium deficiency of the blood is corrected to some extent by the use of cold quartz light [R. 183, 184], that it was correct that the use of a cold quartz light frequently would tend to activate in the body vitamin D to the end that the person so using the light would be less apt to have calcium deficiency, and that if we avoid calcium deficiency we are exerting a general prophylaxis in our body to a certain extent [R. 184, 185].

Dr. Truesdail discussed the essential relationship of rickets and vitamin D in children [R. 245-248], said that use of ultra-violet light irradiation as an aid in the prevention of rickets in children is a common practice [R. 255], and pointed out that rickets itself is a specific

disease, but that there are other related diseases, similar to rickets, which are also caused by improper calcium and phosphorus metabolism [R. 253]. When asked whether Petitioner's lamp would have the same effect in preventing rickets and related diseases as natural sunlight would have, he stated that the artificial light is more effective than natural sunlight upon calcium and phosphorus metabolism [R. 254]. Dr. Parks also referred to the use of the cold quartz lamp to produce vitamin D, which helps to improve calcium metabolism, and said further that the lamp is very helpful in diseases like rheumatism and gout, and is useful in convalescence from acute illness [R. 364, 365].

A reading of the evidence relating to this issue would seem to lead to the conclusion that this Finding of the Commission was based upon nothing but its own Complaint.

6. *Chemical Reaction With Respect to the Blood Stream.*

The Complaint alleged that Petitioner had represented that its product "produces a chemical reaction that keeps the blood stream in balance" [Par. Four, R. 6], and alleged further that "said device will not produce a chemical reaction in the body, keep the blood stream in balance, or aid" in other enumerated respects [Par. Five, R. 8]. The Commission found [Findings, Par. Seven, R. 92]: "It does not produce any chemical reaction with respect to the blood stream . . .", and ordered Petitioner to cease and desist from representing ". . . that it produces any chemical reaction with respect to the blood stream . . ." [Order, Par. 1 (g), R. 97]. Petitioner has no further interest in the language relating to "keeping the blood stream in balance", but contends that the quoted parts of the Findings and Order are plainly wrong.

Dr. Ayres was non-committal. His testimony on the point, in full, was as follows [R. 141]:

“Q. In your opinion, would it produce any chemical reaction in the body, so far as the blood is concerned? A. Well, it might perhaps improve the calcium metabolism to some degree. I wouldn’t want to say how much.”

Dr. Moor contributed more testimony, but very little clarification. In his opinion, the use of such a lamp as Petitioner’s would produce a chemical reaction in the body only in the activation of ergosterol in the skin [R. 172]; it really isn’t ergosterol that is activated, but a cholesterol derivative which is activated by ultra-violet rays, chiefly those, however, in the longer range for the production of vitamin D, and vitamin D influences the absorption of calcium and phosphorus from the gastro-intestinal tract and its deposition in bone, especially in children [R. 172]. A few minutes later, he thought that such a device would not have any effect at all upon the blood [R. 174]. Then he conceded that calcium deficiency of the blood is corrected to some extent by the use of cold quartz light [R. 184]. Next, he did not know whether rays emanating from a lamp such as Petitioner’s penetrated into the skin enough to reach the blood stream [R. 185]. When, in discussion of another matter, the term “actinic rays” was used, he defined “actinic” as meaning chemical, a chemical action, and said it would refer to rays of the type emitted by Petitioner’s lamp [R. 196]. Finally, he agreed that on general exposure to ultra-violet radiation there will be produced an increase in the number of leukocytes and blood platelets of the circulating blood and a decrease in the hydrogen ion concentration, coagulation time and eventually in the blood volume [R. 199].

In contrast with the hesitation and apparent confusion of the Commission's experts, Dr. Truesdail pointed out clearly and convincingly that the vitamin D which was created in the skin of the rats used in his experiments with "Life Lite" was actually what governed their calcium and phosphorus metabolism, the effect being that the calcium and phosphorus, which had been present in not only the alimentary tract but also the blood stream, was made available and utilized in forming new bone tissue by forming tri-calcium phosphate [R. 243]; and that the formation of tri-calcium phosphate would certainly be a chemical change, and in his opinion would be so considered by all chemists, including all of the standard instructors and writers upon the subject of which he had any knowledge [R. 243, 244, 249, 252]. Dr. Leighton testified generally to the same effect [R. 290].

It is submitted that the only possible rational conclusion from the record is that use of Petitioner's lamp does produce a chemical reaction—pronounced and beneficial—with respect to the blood stream.

7. Resistance to Infection.

The Commission also found [Findings, Par. Seven, R. 92] that Petitioner's lamp "is incapable of building up the body's resistance to infection . . ." and ordered Petitioner to cease and desist from representing "that said lamp builds up the resistance of the body to infection . . ." [Order, Par. 1 (h), R. 97].

All of the Commission's evidence relating to this point came from Dr. Moor. Upon direct examination, his entire testimony was as follows [R. 166]:

"Q. Would you say that the use of respondent's device would be of any value in the treatment of chronic infections, Doctor? A. Not directly.

Q. Now, will you simplify that? A. Well, if you mean building up resistance to an infection, that is not an accepted action of ultra-violet radiation."

The word "infection" may mean either the act of infecting or the state of being infected (The New Century Dictionary; Webster's New International Dictionary, Second Edition, Unabridged; Funk & Wagnall's New Standard Dictionary of the English Language). From the quoted testimony it appears that the witness regarded "building up resistance" to infection as synonymous with, or a phase of, "treatment" thereof; hence, he must have understood "infection" to mean the state of being infected, for neither medical men nor laymen ordinarily speak of "treating" the act of infecting.

Upon cross-examination, quotations from certain published writings were read to the witness, and he was asked whether or not he agreed with them. He refused to agree with one of them, and stated that his refusal was based upon the fact that to him it had not been proved, and he accepted the position, "not proved", of the Council of Physical Therapy of the American Medical Association [R. 191]. The dialogue then went on [R. 191, 192]:

"Q. Now, let us take (b): 'Increased resistance of the body to infection.' Do you agree that that is true? I mean as to all of these, of course, upon the application of 2537 angstrom units from a device such as the respondent manufactures? A. No, I don't agree with that. Neither is that proven.

Q. Is your disagreement upon that same basis?
A. Yes, sir.

Q. And solely upon that basis? A. Yes, sir."

But surely, the primary objective of innumerable forms of treatment of bacterial infections is to kill the bacteria! And, surely, killing the bacteria helps the body to resist the infection! And Dr. Moor himself said that the rays of cold quartz lamps are bactericidal, more bactericidal than sunlight [R. 163]! In this he was strongly supported by other witnesses [R. 282, 292, 295, 310, 336, 354, 357].

It follows that the statement of this expert witness that it was not proven that rays from lamps such as Petitioner's increased resistance of the body to infection was recklessly worded, to say the least.

8. *Stimulation to the Tissues of the Skin.*

The finding [Findings, Par. Seven, R. 92] that, "Aside from its irritating effect, the lamp affords no stimulation to the tissues of the skin," was followed by a provision in the Order [Par. 1 (i), R. 97] forbidding Petitioner to advertise "that said lamp affords any stimulation to the tissues of the skin in excess of such stimulation as may result from its irritating effect."

The record does not indicate what impelled the Commission to announce this claimed dependency of stimulation upon irritation. It is true that, at one point in his testimony, Dr. Moor characterized rays from cold quartz lamps as more irritating than natural sunlight [R. 163], and it is also true that both Dr. Moor and Dr. Ayres conceded repeatedly that rays from Petitioner's lamp would have a stimulating effect upon the skin [R. 135, 140, 141, 164, 171, 172], but nowhere in the record does it appear that any witness testified that the stimulation and irritation were the same thing, or resulted from each other, or

to any like effect. Dr. Ayre's testimony reflected somewhat his customary belittling attitude toward Petitioner's product [R. 141], but he did not undertake to limit stimulation to irritation. Dr. Moor stated flatly that rays such as are emitted primarily by the lamp would have a bactericidal and stimulating effect upon the skin [R. 164], and that the stimulating effect would change a chronic inflammation into a more acute one, and thereby probably promote healing somewhat [R. 172], but these statements were not directly connected with his remark, above mentioned, comparing irritating effect of the rays with the like effect of natural sunlight.

Perhaps it may be said to be common knowledge that stimulation frequently results from irritation, but it by no means follows that stimulation is impossible without irritation. A cup of coffee, or, for that matter, mere warmth, may confer stimulation, but such an effect is not what is commonly and ordinarily meant by "irritation". The evidence does not give any support at all to this phase of the Findings and Order.

9. *Normalizing Body Chemistry, Improving Metabolism, and Building New Tissues.*

Of course, Petitioner disagrees with the formalistic Findings contained in Paragraphs Seven (last subparagraph) and Nine of the Findings, to the effect that Petitioner's representations had been erroneous, misleading, false, deceitful, etc., but they fall *pro tanto* as the preceding specific Findings, upon which they depend, fail to find support in the record, hence do not require separate dis-

cussion. Leaving them aside, the last of the Findings to be noticed here are in the following words [Par. Seven, R. 92]:

The lamp is incapable of normalizing body chemistry or affecting metabolism, except in so far as its use may activate cholesterol in the skin, resulting in the production of Vitamin D and the consequent absorption and deposition of calcium and phosphorus in the tissues, particularly in the bone tissues. Likewise, any effect which the lamp may have with respect to the building of new tissues is limited to such effect as may result from the production of Vitamin D.

The corresponding provision of the Order [Par. 1 (n), R. 97] forbids Petitioner to advertise "that said lamp normalizes the chemistry of the body, improves metabolism, or builds new tissues, except in so far as its use may result in the production of Vitamin D."

In its brief before the Commission, Petitioner offered, in substance, to limit its claims concerning improvement of metabolism and normalizing of body chemistry to production of such effects in so far as calcium-phosphorus metabolism and vitamin D activation are concerned. Accordingly, the portion of the Findings above quoted is almost, if not quite, satisfactory, and Petitioner's quarrel, at this point, is chiefly with the form of the Order.

As it now reads, the Order forbids Petitioner to make *any* claim of the kind in question, *except* such claims as fall within the vague proviso, "except in so far as its use

may result in the production of vitamin D.” Considered literally, this proviso can have only an extremely narrow scope, if it is not entirely meaningless; that is, the production of vitamin D is not itself a part of metabolism, although having a highly important effect upon metabolism, and is not itself a part of the process of building new tissues, although an important factor in actuating such process, hence the proviso can apply only to the normalizing of the chemistry of the body. Such construction would permit Petitioner to advertise only that its lamp would cause production of vitamin D, and nothing more, in spite of the fact that the Findings themselves concede the effects upon metabolism and the building of new tissues.

Of course, it seems likely that the Commission did not have any such intention, but, pursuant to the Findings, intended the proviso to apply, in some unstated way, to all three of the biological effects enumerated in the wording preceding the proviso. Nevertheless, the uncertainty exists, and Petitioner should not be compelled to ascribe its own meaning to the existing language of the proviso, at the risk of being subjected to further litigation and possible heavy penalties (Sec. 45 (1), Title 15, U. S. C. 1940 ed.).

It should be noted, also, that the word “may” in the proviso is inaccurate. The use of Petitioner’s lamp, as directed, *does* result in the production of vitamin D, and there is no doubt of it, hence the Order should not insinuate that such result is a mere possibility.

Accordingly, the Order should be corrected to conform to the Findings and the evidence. For example, subparagraph “(n)” of paragraph 1 of the Order could be made to read, “that said lamp normalizes the chemistry of the body, improves metabolism, or builds new tissues, except in so far as such effects are related to the production of vitamin D resulting from use of the lamp.”

10. *Paragraph 3 of the Commission's Order.*

Specification of Error numbered 10 relates to paragraph 3 of the Commission's Order [R. 98]. This paragraph, by its terms, depends in part upon provisions of paragraph 1 hereinbefore discussed. Accordingly, to the extent to which those provisions are set aside or modified by the Court, paragraph 3 should be set aside or modified, unless the Court is of opinion that it is needless, as a matter of necessary implication.

IV.

Conclusion.

Analysis of the material contained in the rather complex record in this case has required, as a matter of practical necessity, that the foregoing discussion be set out under topical headings. This does not mean, of course, that the various parts of the Findings challenged, or the various portions of the testimony referred to, should be considered only piecemeal, to the exclusion of their bearing upon each other. All are interrelated, just as the health of one part of the human body is related to the health of other parts. A brief over-all glance at the case as a whole may be helpful at this point.

The ultimate question is, what shall Petitioner be permitted to say in its advertising? To put it in another way, what wording in advertisements shall be permissible, and what shall be prohibited? Thus, discrimination in choice of words was necessary at all stages of this proceeding. Yet, at the outset, one of the principal difficulties confronting Petitioner, and now confronting the Court, has been and is to ascertain the meaning of some of the phraseology of the Commission's Findings and Order. For example, it seems impossible to derive a definite meaning from subparagraph (n) of paragraph 1 of the Order. This condition of the record itself creates a hazard for Petitioner, which, it is submitted, is not contemplated by the Federal Trade Commission Act.

It is submitted, also, that the issuance of a penal Order of the kind and scope of the one here involved upon such

a flimsy basis as was developed at the hearing before the Commission's trial examiner in this case is likewise without the contemplation of the Act. The Commission produced only two witnesses.¹⁴ Dr. Ayres, a specialist in dermatology, had not even examined the "Life Lite" lamp [R. 145, 146], and Dr. Moor was also unacquainted with it [R. 161]. Dr. Ayres admitted that, as to part of his testimony, he was "merely speculating" [R. 149], and Dr. Moor agreed that he had not had sufficient personal experience in the use of the cold quartz lamp to form a basis for an opinion as an expert witness [R. 193]. Dr. Ayres was opposed to home treatment of any disease without the supervision of a physician [R. 145], and Dr. Moor stated that it was the general philosophy of the medical profession that people should not undertake any health measures, other than eating and sleeping, except on the advice of a physician [R. 175, 176]. A substantial part of the testimony of Dr. Moor was merely a profession of faith in certain published statements of the Council of Physical Therapy of the American Medical Association [R. 177, 178, 180, 191, 192], rather than his own independent opinion. The testimony of both gentlemen abounded in mere general disparagement of Petitioner's lamp, with frequent hesitancy, ambiguities, self-contradiction, false assumptions, evasions and statements based on "general impression" [R. 133]. By contrast, the testimony of the eminently qualified scientists produced by Petitioner, Drs. Truesdail and Leighton, who had themselves actually used the "Life Lite" lamp, evinced a scientific exactitude and careful precision of thought that could hardly fail to

¹⁴It called to the stand, also, the President of Petitioner and a witness produced by Petitioner, but their testimony was not at all helpful to the Commission's case, in so far as the issues here presented are concerned.

carry conviction to an open-minded person. Convincing, also, was the testimony of Dr. Parks, the experienced general practitioner, who did not merely theorize, but described actual cases from his own experience.

To quote from the *Kidder Oil Co.* case, *supra* (117 F. (2d) at page 899):

. . . it occurs to us that the Commission would have discerned the importance, and perhaps the necessity, of making such tests and experiments as would demonstrate, at least to a reasonable certainty, the validity of the charge which it had the burden of sustaining.

But the Commission was content to leave the burden of "tests and experiments" to Petitioner. It did not even bother to have its experts examine the "Life Lite" lamp before the hearing. And when Petitioner concluded presentation of its evidence, including much entirely unanswered testimony concerning the crucial facts in the case, the Commission offered no rebuttal, nor asked for opportunity to offer any.

It is respectfully submitted that the Findings and Order of the Commission, in the respects here challenged, are without substantial support in the evidence, and should be set aside, except where the text of the foregoing discussion indicates that modification is appropriate.

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